

POKROVSKAYA, V.M.; POLYANSKAYA, T.N.; PROZOROVSKIY, N.A.

Topographic distribution of *Draba sibirica* (Pall.) Thell in
Ryazan Province. *Biul. MOIP. Otd. biol.* 68 no.2:137-139 Mr-Ap
'63. (MIRA 17:2)

POKROVSKAYA, V. V.

"Observations of Plants From the Northern Steppes in the Nursery in Connection With the Problem of Introducing Them as Crops." Cand Biol Sci, Moscow State U, Moscow, 1953. (RZhBiol, No 1, Sep 54)

SO: Sum 432, 29 Mar 55

" POKROVSKAYA, V.M., inzh.

Grinding the taps. Mashinostroitel' no.2/3:50-54 H-D '56.
(Grinding and polishing) (Taps and dies) (MIRA 12:1)

POKROVSKAYA, V. M. Cand Tech Sci -- (diss) ^{"Thread-Cutting with} ~~"The Operations of~~
^{Power Tops."}
~~Screw-Cutting Machines."~~ Mos, 1957. 15 pp 20 cm. (Min of
Higher Education USSR, Moscow Order of Lenin and Order of
Labor Red Banner Higher Technical School im Bauman), 100 copies
(KL, 16-57, 100)

-11-

POKROVSKAYA, V.M.

PA - 2528

AUTHOR: POKROWSKAJA, W.M., engineer
TITLE: On the Dynamics and the Temperature of the Cutting of Machine-driven Thread Cutting Tools. (Dinamika i temperatura rezanija pri rabote maschinnyimi metschikami, Russian).
PERIODICAL: Latvijas PSR Zinatnu Akad. Vestis, 1957, Vol 1, Nr 2, pp 135 - 152 (U.S.S.R.)
 Received: 5/ 1957

Reviewed: 6 / 1957

ABSTRACT: Improvement of the quality of threads is possible on the basis of a sound knowledge of various factors which are of importance in the course of thread-cutting. The dynamics and the temperature of this process are influenced by the size of the device, by the geometric parameters, and by the velocity of cutting. In order to determine the most rational manner of threadcutting by means of a machine tool as well as to ascertain dynamic dependences investigations were carried out. The papers published by Dr.G.I.Granowski, Roshdestwenski, and Romanow deal with this problem. The rear edges of the cutting parts of the device above all influence the amount of the moment of rotation if they are small (ill. 6 - 8). The temperature characterizes the stress on the cutting parts. With equal stress of the process it is possible to allow different kinds of cutting processes, so that a variety of instruments can be used (for different types of work). (18 illustrations pp 137 - 150).

Card 1/2

POKROVSKAYA, V.M.

Classification of stages of growth of plants. Vest.Mosk.un.
Ser.biol.,pochv.,geol.,geog. 13 no.4:199-201 '58.
(MIRA 12:4)

1. Kafedra biogeografii Moskovskogo universiteta.
(Growth (Plants))

POKROVSKAYA, V.M., kand.tekhn.nauk; PODSUSHNYY, A.M., otv.r^{ed}.

[Strength of machine taps] Stoikost' mashinnykh ~~st~~etchikov.
Vladivostok, 1959. 8 p. (Vladivostok. Dal'nevostochnyi politekh-
nicheskii institut. Trudy, vol.52, no.9) (MIRA 14:4)

(Taps and dies)

POKROVSKAYA, V.M.

Results of observations on the life cycle of steppe plants under
nursery conditions. Biul.Glav.bot.sada no.35:31-35 '59.
(MIRA 13:2)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.
(Streletskoye Steppe Preserve--Steppe flora)

GAKEJ', R.A. kand.tekhn.nauk; Prinimali uchastiye: KARGIN; POKROVSKAYA, V.N.,
inzh.

Mechanization of the cleaning of carding machines. Nauch.-issl.
trudy TSNIIShersti no.18:39-51 '63. (MIRA 18:1)

1. Starshiy inzhener nauchno-issledovatel'skoy laboratorii pri
Kupavinskoy fabrika (for Kargin). 2. Kupavinskaya fabrika (for
Pokrovskaya).

POKROVSKAYA, V.N.

Study of the working process of a hydraulic feeder. Zap. LGI 41
no.1:120-129 '59. (MIRA 16:5)
(Hydraulic conveying)

Doc 1119005 2112/1
POKROVSKAYA, Vera Nikolayevna; KURENKOV, I.I., redaktor; KOROVENKOVA, Z.A.,
tekhnicheskii redaktor

[Mechanizing the purification of a mine's water supply] Mekhanizatsiia
ochistki shakhtnykh vodosbornikov. Moskva, Ugletekhnizdat, 1955. 109 p.
(Water--Purification) (MIRA 9:1)

POKROVSKAYA, V.M., inzh.

Investigating the performance of a hydraulic feeder in delivering granular materials into pressure pipelines. Nauch. dokl. vys. shkoly; gor. delo no.2:271-279 '58. (MIRA 11:6)

1. Predstavlena kafedroy rudnichnogo transporta Leningradskogo gornogo instituta im. G.V. Plekhanova.
(Mine pumps)

POLEVOY, Viktor Vasil'yevich; POKROVSKAYA, Vera Nikolayevna; FAKTOROVICH, Abram Mikhaylovich; GERONT'YEV, V.I., prof., doktor tekhn.nauk, obshchiy red.; MEDVEDEV, L.G., otv.red.; KOLOMIYTSSEV, A.D., red.izd-va; SHILYAR, S.Ya., tekhn.red.

[Cable belt conveyors] Lentochno-kanatnye konveieri. Pod obshchei red. V.I.Geront'eva. Moskva, Ugletekhizdat, 1959. 52 p. (MIRA 12:4)
(Conveying machinery) (Mining machinery)

POKROVSKAYA, Vera Nikolayevna; GUDALOV, V.P., otv. red.; ABRAMOV, V.I.,
red. izd-va; SHKLYAR, S.Ya., tekhn.red.

[Mechanization of mine loading and transfer points] Mekhanizatsiia
shakhtnykh pogruzochnykh i peregruзоchnykh punktov. Moskva, Gos.
nauchno-tekhn. izd-vo lit-ry po gornomu delu, 1961. 111 p.
(MIRA 14:9)

(Ore handling—Equipment and supplies)
(Automatic control)

POKROVSKAYA, V.N., kand. tekhn. nauk; GRACHEV, N.P., kand. tekhn. nauk

Automatic, small-scale, chamber-type, hydraulic feeder. Gor.
zhur. no.8:59-62 Ag '64. (MIRA 17:10)

1. Leningradskiy gornyy institut.

YAKOBSON, M.O.; POKROVSKAYA, V.S.

Investigating processes of fine planing rectilinear guides.
Stan. 1 instr. 29 no.3:7-10 Mr '58. (MIRA 12:1)
(Metal cutting)

POKROVSKAYA, V.S. (Krasnodar)

Agricultural-meteorological observations in schools. Geog.v
shkole 22 no.6:72-74 N-D '59. (MIRA 13:4)
(Krasnodar Territory--Meteorology, Agricultural)

POKROVSKAYA, E.

Determination of the viscosity of alkaline solutions of viscose rayon.
A. Pakshver, S. Frolov and E. Pokrovskaya. Trans. Inst. Chem. Tech. Ivanovo
 (U.S.S.R.) 1940, No. 3, 189-91.--Dissolve a sample of air-dry viscose rayon
 (with a known moisture content) with mixing in a glass contg. 8% NaOH and
 keep it in a cooling mixt. at -5° . After soln. remove the glass from the
 cooling mixt., let the temp. rise to 20° , pour the soln. into a bulb used
 for the detn. of η of cuprammonium cellulose soln., keep it in a thermostat
 at 20° and det. the η of cellulose (I). One percent solus. of I in a base can
 stand without the sepn. of I from the soln. for 10-14 hrs., after which a tur-
 bidity and white flakes appear. Standing of the soln. in open air and air
 blowing through the soln. do not change the η of the basic soln. I dissolves
 somewhat more rapidly in an 8% soln. of NaOH contg. 1% of ZnO , and the sepn.
 of I takes place after a longer period of time. The relative η of the I soln.
 in an 8% base is less than that in a similar base contg. 1% of ZnO . The basic
 solns. of I are considerably more stable than are the cuprammonium solns. and
 they can be used in some cases (in investigating the properties of viscose silk
 and staple fiber) for measuring the η .

W. R. Henn

S.m.

POKROVSKAYA, Ye., arkhitektor

Workshop for repairing agricultural equipment on the "Zarya
Kommunizma" state farm. Sel'.stroï. no.8:11-13 Ag '62.

(Agricultural machinery--Maintenance and repair)

(MIRA 15:11)

POKHREMAN, Ye.; KISHINEV, I.

Universal types of storage for potatoes, vegetables and fruit.
Sov. torg. 35 no.11:53-56 N '61. (MIRA 14:10)
(Farm produce--Storage)

POKROVSKAYA, YE. A.

Agriculture & Pland & Animal Industry

Utilization of horses and draft animals. Saratovskoe obl. gos. izd-vo, 1951.

9. Monthly List of Russian Accessions, Library of Congress, April 1957. 2Unclassified.

POKROVSKAYA, Ye. A.

Dr. Agric. Sci.

"Colostrum; Its Nutritional and Prophylactic Significance in Raising Calves,"
Sub. 31 Jan 47, Moscow Zooveterinary Inst.

Dissertations presented for degrees in science and engineering in Moscow in 1947.

SO: Sum.No.457, 18 Apr 55

S/195/60/001/003/012/013
B002/B058

AUTHORS: Rozovski, A. Ya., Shchekin, V. V., Pokrovskaya, Ye. G.
TITLE: Effect of the Internal Diffusion Inhibition on the Kinetics
of the Ethylene Hydrogenation Reaction
PERIODICAL: Kinetika i kataliz, 1960, Vol. 1, No. 3, pp. 464-470

TEXT: This paper was read at the Vsesoyuznaya konferentsiya po organicheskomu katalizu (All-Union Conference of Organic Catalysis) held in Moscow on November 18, 1959. Three samples of a nickel-aluminum catalyst of various grain size were used for the study; F. V. Koranevskaya determined the properties by measuring the adsorption. The kinetics of the ethylene hydrogenation on these catalysts was studied between 80 and 140°C. The hydrogenation proceeds as first-order reaction, apart from the inhibition by the reaction products; the apparent activation energy was calculated for all three catalysts as 4.1 kcal/mole. A strong diffusion inhibition takes place thereby; the reaction proceeds in the range of internal diffusion. The activation energy amounted to 8.2 kcal/mole for the kinetic range of the reaction. A comparison between experimental and calculated values shows

Card 1/3

Effect of the Internal Diffusion Inhibition
on the Kinetics of the Ethylene Hydro-
genation Reaction

S/195/60/001/003/012/013
B002/B058

that the inhibition through internal diffusion can be well represented by the previously given equation (Ref. 1):

$$\alpha = v_o \ln \frac{1}{1-y} - \beta \cdot v_o \cdot y, \alpha \text{ being } \frac{\sqrt{K_h r D_K^i S_g}}{L\sqrt{2}(1+n+\delta)} = \frac{K_h S_g^f}{1+n+\delta}, \beta = \frac{n - 1/4 B}{1 + n + \delta},$$

v_o the specific rate of addition in mole/g·sec; y rate of reaction;
 K_h observed rate constant of the heterogeneous catalytic reaction of
first order in mole/cm²·sec; r mean radius of pores in cm; D_K^i diffusion
coefficient in mole/cm·sec; S_g specific catalyst surface in cm²/g; L
distance between catalyst grain surface and the center in cm; n change
of the molar number through the reaction; δ degree of dilution; B the
parameter determining the order of reaction in the kinetic range; f
factor of internal diffusion inhibition. R. D. Obolentsev and A. V. Mashkina
are mentioned. There are 4 figures, 5 tables, and 8 references:

Card 2/3

ROZOVSKIY, A.Ya.; BASHKIROV, A.N.; KAGAN, Yu.B.; POKROVSKAYA, Ye.G.

Water and water vapor oxidation of the iron catalysts for
synthesis from CO and H₂. Kin.i kat. 2 no.6:830-837 N-D '61.
(MIRA 14:12)

1. Institut neftekhimicheskogo sinteza AN SSSR.
(Carbon monoxide)
(Hydrogen) (Catalysts, Iron)

POKROVSKAYA YE. I.

USSR/Medicine - Ticks
Parasitology

May/Jun 49

"Biology of the Tick Dermacentor Marginatus Sulz
in the Conditions of Voronezh Oblast," Ye. I.
Pokrovskaya, Chair of Gen Biol, Voronezh State
Med Inst, 5 pp

"Zool Zhur" No 3

Research was carried out on medical and veteri-
nary significance of this tick as a parasite and
carrier of various diseases of man and farm ani-
mals. Observed large number of this species in
37 of the 85 rayons of Voronezh Oblast. Number
is at a maximum from 10 or 20 Apr to 20 or 30 May
151781

USSR/Medicine - Ticks (Contd) May/Jun 49

and drops to a minimum in Jun. Tabulates and
details data on time required for metamorphosis
of the tick. Chief, Chair of Gen Biol: Docent
Ye. I. Pokrovskaya.

151781

POKROVSKAYA, Ye.I.

Ecology of larvae and nymphs of the tick *Dermacentor marginatus* Suls.
in the Voronezh region. Zool. zhurnal 30 no.3:224-228 May-June 51.
(CJML 20:8)

1. Department of General Biology (Head—Docent Ye.I. Pokrovskaya),
Voronezh State Medical Institute.

POKROVSKAYA, Ye. I.; VOLGOV, Ya. S.

"An experiment of anti-mites treatment with DDT and Benzene Hexachloride $C_6H_6Cl_6$ under the conditions of Voronezh Oblast'.

SO: Vet. 29 (3) 1952, p. 24-26

Cattle and horses treated with oil prepns of 2.5-5.0% DDT or hexachlorocyclohexane just begore, and again at 10 day intervals (3 treatments) after return to pasture suffices to prevent invasion by *D.marginatus* and *Ix. ricinus*. The acaricidal action of the substances declines rapidly 7-10 days after application.

POKROVSKAYA, Ye.I., zaveduyushchaya.

Effect of DDT and hexachlorocyclohexane preparations upon the ticks *Dermacentor marginatus* Sulz. Med.paraz.i paraz.bol. no.3:239-242 My-Je '53.
(MLRA 6:8)

1. Kafedra biologii Voronezhskogo meditsinskogo instituta.
(DDT (Insecticide)) (Ticks)

(CA 47 no.19:10169 '53)

Ixodes ticks of the genus *Dermacentor* are themitters of zoono-
sporidiosis of animals and also transmitters and carriers of tularemia, tick spotted
fever, spring-summer encephalitis, and spring-autumn fever. During 1946-51, USSR
workers did ~~na~~ a considerable amount of work on the extermination of these ticks
with DDT and GKhtsG. In the present instance, results are reported on the use of
DDT solns in solar oil and of a 10% aqueous ~~salutia~~ suspension of GKhtsG dust for
the extermination of *D. marginatus* Sulz ticks at kol'khozes where they infest horses,
cattle and other animals.

257T49

POKROVSKAYA, E. I.

May/Jun 53

USSR/Medicine - Epidemiology

"Ecology of the Tick *Dermacentor marginatus* Sulz in Voronezh Oblast," E. I. Pokrovskaya,

Dept. of Biology, Voronezh State Med Inst

Zool Zhur, Vol 32, No 3, pp 435-440

Ticks of the genus *Dermacentor* are not only parasites of cattle but they also attach humans. These ticks cause tularemia, tick-borne spring-summer encephalitis, typhus, and spring-autumn fever. They are important as carriers of the causative agents of Haemosporidia infections in cattle (piroplasmosis, nuttalliosis, etc.). The apparent seasonal activity of the tick *Dermacentor marginatus* and its capacity to go without food for a long period of time is important for control measures. These ticks are predominant in the steppe and the forest-steppe areas of Voronezh Oblast. The maximum density of the occurrence of this tick is reached toward the end of April and in early May.

265 TL6

Name: POKROVSKAYA, Yekaterina Ivanovna

Dissertation: Information upon the ecology of the tick *Dermacentor marginatus* suiz, and also upon its pathogenesis and the struggle against it, according to data of a study in the south-east Chernozem Center

Degree: Doc Biol Sci

Affiliation: [not indicated]

Defense Date, Place: 11. Mar. 57 Council of Moscow Order of Lenin and Order of Labor Red Banner State U imeni Lomonosov

Certification Date: 16 Nov 57

Source: BMVO 24/57

POKROVSKAYA, Ye. I.

PRIKHOT'KO, A.F.

24(7) 13 PHASE I BOOK EXPLOITATION SOV/1365
L'vov. Universytet

Materialy X Vsesoyuznogo soveshchaniya po spektroskopii. t. 1: Molekulyarnaya spektroskopiya (Papers of the 10th All-Union Conference on Spectroscopy. Vol. 1: Molecular Spectroscopy) [L'vov] Izd-vo L'vovskogo univ-ta, 1957. 499 p. 4,000 copies printed. (Series: Itsi: Fizichnyy zbirnyk, vyp. 3/8/)

Additional Sponsoring Agency: Akademiya nauk SSSR. Komissiya po spektroskopii. Ed.: Jazer, S.L.; Tech. Ed.: Saranyuk, T.V.; Editorial Board: Lavitsky, G.S., Academician (Resp. Ed., Deceased), Neporent, B.S., Doctor of Physical and Mathematical Sciences, Fabelinskiy, I.L., Doctor of Physical and Mathematical Sciences, Fabrikant, V.A., Doctor of Physical and Mathematical Sciences, Kornitskiy, V.G., Candidate of Technical Sciences, Rayskiy, S.M., Candidate of Physical and Mathematical Sciences, Klimovskiy, L.N., Candidate of Physical and Mathematical Sciences, Miliyanovich, V.S., Candidate of Physical and Mathematical Sciences, and Glauberman, A. Ye., Candidate of Physical and Mathematical Sciences.

Card 1/30

Dianov-Klokov, V.I., and A.D. Stakhovskiy. Registering Device for Infrared Spectrometers	401
Markov, M.M. The Spectral Sensitivity of a Coated Low-Inertia Bolometer	403
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Pokrovskaya, Ye. I. Variations in the Infrared Spectra of Crystalline Polymers During Melting	416

Card 2/30

COUNTRY : USSR
 CATEGORY : Plant Physiology. Respiration and Metabolism. I
 ABS. JOUR. : RZhBiol., No. 3 1959, No. 10592

AUTHOR : ~~Pokrovskaya, Ya. I.~~
 INST. : Academy of Sciences, USSR
 TITLE : Some Data on the Oxidation and Reducing Processes
 in Halophytes.

ORIG. PUB. : V sb.: Pamyati akad. N. A. Maksimova, M., AN SSSR,
 1957, 268-274

ABSTRACT : The rate of the respiration and activity of phenolases
 and catalases in 11 species of halophytes was studied at
 Valuyevskaya Experiment and Amelioration Station (Stalin-
 grad oblast'). A very low rate of respiration and activ-
 ity of the peroxidase, catalase and phenoloxidase was
 found in euhalophytes (or salt accumulating halophytes).
 Crinohalophytes (salt secreting halophytes) were charac-
 terized by a rather high rate of respiration and activity
 of oxidizing ferments, and in contrast to euhalophytes

CARD: 1/3

4

CARD: 2/3

USSR / Zooparasitology: Mite and Insect Vectors of
Disease Agents: Acarids.

G

Abs Jour : Ref Zhur - Biologiya, No 5, 1959, No. 19718

Author : Pokrovskaya, Ye. I.; Kuznetsov, P. K.

Inst : Voronezh Medical Institute

Title : Biotopes and Seasonal Behavior of Ixodidae
(Ixodes and Dermacentor) Under Natural
Conditions in Voronezhskaya Oblast'

Orig Pub : Tr. Voronezhsk. med. in-ta, 1957, 28, 135-137

Abstract : D. marginatus is native to pastures which
occupy waste lands and ravines. Spring
activity lasts from April until June; in
the summer months this species is absent;
full activity lasts from August until
October, when this species is met with again
but in lesser numbers. I. ricinus is native

Card 1/2

to insular forests and scrubwood territories.
It is active from April until the end of
the warm season, the peak numbers arriving

APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001341630005-8"

H. A. Filippova

Card 2/2

USSR / Zooparasitology. Acarina and Insects. Vectors G
of Pathogenic Agents. Acarina.

Abs Jour: Ref Zhur-Biol.; No 6, 1959, 24278.

Author : Pokrovskaya, Ye. I.
Inst : Voronezh Medical Institute.
Title : On the Problem of Summer Diapause of Sexually
Mature Ticks Dermacentor Marginatus Sulz. and on
the Duration of Their Starvation Period Under Con-
ditions of the Southeast of the Chernozem Center.

Orig Pub: Tr. Voronezhsk. med. in-ta, 1957, 28, 139-140.

Abstract: With the beginning of summer heat, sexually mat-
ure ticks fall into a passive state. In experi-
ments conducted on pastures, they lived for two
years without food; about 89% of the ticks sur-
vived.

Card 1/1

USSR/Zooparasitology. Ticks and Insects - Vectors of G
Causal Organisms. Ticks.

Abs Jour: Ref. Zhur. - Biol., No 23, 1958, 104118

Author : Pokrovskaya, Ye. I.

Inst : Voronezh Medical Institute

Title : Pathogenic Effect of Bites of Sexually-Mature
Ticks of the Species Dermacentor marginatus
Sulz. on the Host.

Orig Pub: Tr. Voronezhsk. med. in-ta, 1957, 28, 141-149

Abstract: No abstract

Card 1/1

POKROVSKAYA, Ye.I.

Pathogenic effect of the bite of the mature tick *Dermacentor marginatus* Sulz. on the host [with summary in English]. Zool. zhur. 36 no.2:214-218 F '57. (MIRA 10:6)

1. Kafedra biologii Voronezhskogo gosudarstvennogo meditsinskogo instituta.

(Ticks)

POKROVSKAYA, E. I., RYABYKH, L. V. and BEZUKLADNAYA, G. S.

"The Repellence of 1-ACYL Tetrahydroquinoline (RP-99) and Mixtures
Based on it (RP-201, RP-209, and RP-220) In Respect to Mosquitos
Under the Conditions Prevailing in the Forest Landforms of Voronezh
Oblast'."

Tenth Conference on Parasitological Problems and Diseases with Natural
Reservoirs, 22-29 October 1959, Vol. II, Publishing House of Academy of
Sciences, USSR, Moscow-Leningrad, 1959.

Voronezh Medical Institute

POKROVSKAYA, Ye. I.

"The Metabolism of Plants in Salty Soil." Cand Biol Sci, Inst of
of Plant Physiology imeni K. A. Timiryazev, Acad Sci USSR. (VM, 13 Dec 54)

Survey of Scientific and Technical Dissertations Defended at USSR
Higher Educational Institutions (12)
SO: Sum. No. 556, 24 Jun 55

POKROVSKAYA, Ye.I.

Salt tolerance and some aspects of metabolism in glycophytes
[with summary in English]. Fiziol. rast. 5 no.3:264-271 '58.
(MIRA 11:6)

1. Institut fiziologii rasteniy im. K.A. Timiryazeva Akademii
nauk SSSR, Moskva.

(Plants, Effect of salts on)

POKROVSKAYA, Ye.I.; TERESHCHENKO, A.P.; CHIZHKOV, S.V.

Chromatographic separation of cations of the urine. Vop. med.
khim. 11 no.1:89-94 Ja-F '65. (MIRA 18:10)

POKROVSKAYA, Ye., arkhitekto; KOROSOVA, N., arkhitekto

New types of storahouses for potatoes, fruits and vegetables.
Eksper. proekt. no. 5129-34 '62. (MIRA 18.9)

POKROVSKAYA, Ye., arkhitektor; MILOVIDOV, G., arkhitektor

Interfarm enterprises are combines for processing farm produce.
Eksper. proekt. no.5:35-41 '62. (MIRA 18:9)

BARASHKOV, Georgiy Konstantinovich; POKROVSKAYA, Ye.I., otv. red.
GORBACHEVA, L.B., red. izd-va; YEGOROVA, N.F., tekhn. red.

[Chemistry of the algae] Khimiia vodoroslei. Moskva, Izd-vo
Akad.nauk SSSR, 1963. 141 p. (MIRA 16:4)
(ALGAE) (BIOCHEMISTRY)

POKROVSKAYA, Ye. I.; RYABYKH, L. V.; BATAYEV, P. S.

Preliminary field trials of new preparations of mosquito repellents under natural conditions of Voronezh Province. Med. paraz. i paraz. bol. no.6:723-726 '61. (MIRA 15:6)

1. Iz kafedry biologii (zav. - prof. Ye. I. Pokrovskaya)
Voronezhskogo meditsinskogo instituta i Instituta meditsinskoy
parazitologii i tropicheskoy meditsiny imeni Ye. I Martsinovskogo
(dir. - prof. P. G. Sergiyev)

(INSECT BAITs AND REPELLENTS) (MOSQUITOES)

POKROVSKAYA, Ye. I.; BATAEV, P. S.; RYABYKH, L. V.

Testing new preparations repelling mosquitoes under natural conditions in Voronezh Province. Nauch. dokl. vys. shkoly; biol. nauki no.3:23-26 '62. (MIRA 15:7)

1. Rekomendovana kafedroy biologii Voronezhskogo meditsinskogo instituta i Institutom meditsinskoy parazitologii i tropicheskoy meditsiny im. Ye. I. Martsinovskogo.

(VORONEZH PROVINCE--MOSQUITOES--EXTERMINATION)
(INSECT BAITS AND REPELLENTS)

POKROVSKAYA, Ye.M.

Conservative therapy of congenital myogenic torticollis. *Pediatrics*
37 no.10:51-55 O '59. (MIRA 13:2)

1. Iz kliniki detskoj khirurgii i ortopedii (zaveduyushchiy - chlen-
korrespondent AMN SSSR prof. S.D. Ternovskiy) II Moskovskogo meditsin-
skogo instituta imeni Pirogova na baze Detskoj bol'nitsy imeni N.F.
Filatova (glavnyy vrach M.N. Kalugina).
(TORTICOLLIS surg.)

POKROVSKAYA, Ye. S. and ROBINZON, Ye. A.

"Determination of Contents of Groups in Gasoline," Acad. Sci USSR, 1936

10

Ca

The products of the condensation of benzene with cyclohexene in the presence of aluminum chloride. S. S. Naimethin and K. S. Polunovskaya. *J. Gen. Chem.* (U. S. S. R.) 7, 902-72 (1937). A cooled mixt. of C_6H_6 , cyclohexene and $AlCl_3$ gives chiefly cyclohexylbenzene (I) as well as smaller amts. of the di- and trisubstituted homologs. A similar reaction with I and C_6H_6 gives larger amts. of 1,2- and 1,4-dicyclohexylbenzene (II) as well as some 1,2,3-tricyclohexylbenzene (III), m. 65-6°. The structure of III was proved by Se dehydrogenation to 1,2,3-triphenylbenzene and by Pt hydrogenation to 1,2,3-tricyclohexylcyclohexane. Since III is also formed from II, C_6H_6 , and $AlCl_3$, and is the only trisubstituted compound found in any of the reactions, it is evident that an isomerization takes place when the 3rd cyclohexyl group enters the ring. A tetracyclohexylbenzene, m. 265-6°, is also formed in these reactions, and is probably the 1,2,4,5-tetrasubstituted isomer. If this is so, another isomerization must occur when the 4th group enters the ring. When these compounds are shaken with 100% H_2SO_4 , the mono- and dicyclohexylbenzenes dissolve, but the higher homologs do not. The compounds are all very sol. in $PhNH_2$, and the crit. soln. temps. cannot be detd. The lower homologs are sol. in levulinic and pyrotartaric acids and in petroleum oils.

H. M. Leicester

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

62-117, 22-117

1ST AND 2ND ORDERS		PROCESSES AND PROPERTIES INDEX	
<p>Oxidation of anthracene and methylanthracene by means of chromic acid and dilute nitric acid. M. A. Il'inski and E. S. Pokrovskaya. <i>Compt. rend. acad. sci. U. R. S. S. 17, 111-115(1937)</i>.—Detn. of the anthracene in unpurified anthracene, according to the method of Luck, is, despite the age of the method and the numerous modifications available, not accurate, especially in the presence of β-methylanthracene. A series of expts. shows the most important factor in the accuracy of the method in the presence of methylanthracene to be the concn. of the solvent AcOH. Because of the impossibility of obtaining accuracy by oxidation of anthracene with CrO_3 in concd. AcOH, expts. were made in which H_2O solns. of the acid were used. An optimum was found in a series with 0.5 g. methylanthracene (pure sample), 22 ml. AcOH, 100 ml. H_2O, 2.5 g. CrO_3 and 2 hrs. warming, when only 0.4% of CO_2 was evolved for the oxidation of anthracene were: 0.5 g. anthracene, 30 ml. AcOH, 70 ml. H_2O, 5 g. CrO_3 and 4 hrs. warming. The oxidized product weighed 0.577 g.; after treatment with oleum, 0.541 g. Use of dil. HNO_3 as the oxidizer resulted in production of very impure mixts. of products. D. Vexler</p>			
<p>ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>			
<p>EXHIBITION</p>			

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ca

THE PRODUCTS OF CONDENSATION OF BENZENE WITH CYCLOPENTENE IN THE PRESENCE OF ALUMINUM CHLORIDE. S. S. Nametkin and R. S. Pokroykaya. *J. Gen. Chem.* (U. S. S. R.), 9, 999-713 (1938); cf. C. A. 31, 8332².

Condensation of C_6H_6 and cyclopentene (I) with $AlCl_3$ in the cold gave cyclopentylbenzene (II), b.p. 215-16°, d_4^{20} 0.9504, n_D^{20} 1.5311, M. R. 47.50, as well as smaller amts. of di-, tri- and tetra-substituted homologs. A similar reaction of I and II formed larger amts. of dicyclopentylbenzene (III) and tricyclopentylbenzene (IV). II is a mixt. of the 1,4-isomer, m. 42-3°, and 1,3-isomer, b. 154-5°, not solidifying at -20°, and III is a mixt. of the 1,3,5-isomer, b. 201-2°, m. 60-1°, and a liquid isomer, b. 191-3°. The condensation of I and III gave tetracyclopentylbenzene, m. 200-1°. In the hydrogenation with a Pt-charcoal catalyst at 170-80° for 20-40 hrs. II gave cyclopentylcyclohexane, b.p. 209-10.5°, d_4^{20} 0.8740, n_D^{20} 1.4725, M. R. 48.82; 1,4-III gave dicyclopentylcyclohexane, m. 86-6.5°, and 1,3-III gave tricyclopentylcyclohexane, b. 194-5°, solidifying 20-1°, d_4^{20} 0.9400, n_D^{20} 1.5031, M. R. 100.58. II, III and IV are sol. in 100% H_2SO_4 , while their hydrogenation products are insol. The compds. are sol. in dichloroethane, petr. ether and petroleum oils, b. 200-50° and 275-370°. The lower homologs are sol. in levulinic acid. Chas. Blanc

ASB-55A METALLURGICAL LITERATURE CLASSIFICATION

STANDARD NO. 101083 HEP ONE ONE

STANDARD NO. 101083 HEP ONE ONE

Naphthalene-aromatic hydrocarbons of the naphthalene and tetralin series containing a cyclopentyl ring in the side chain. R. S. Pokrovskaya and R. Ya. Suschik.
J. Gen. Chem. (U.S.S.R.), 9, 2201 (1939) (BKRO). Condensation of naphthalene with cyclopentanone (I) in the presence of AlCl₃ yields cyclopentenaphthalene, b.p. 134-5°, d₄²⁰ 1.0410, n_D²⁰ 1.0456, n_D²⁵ 1.0411, n_D³⁰ 1.0088, 1.6400; mixts. of isomeric di(cyclopentenaphthalenes), n_D²⁰ 1.0407, d₄²⁰ 1.0410, 1.0456, resp., mixts. of isomeric tri(cyclopentenaphthalenes), b.p. 182-7°, 187-92°, 192-200°, resp., and 227-32°; condensation of tetrahydronaphthalene (II), n_D²⁰ 1.4350, with I, gives pentacyclopentenaphthalene (III), b.p. 170-7°. Condensation of tetralin pentacyclopentenaphthalene, n_D²⁰ 1.4361, with I under analogous conditions gives cyclopentytetralin (IV), b.p. 120-5-41°, solidifies at -50°, d₄²⁰ 0.9948, d₄²⁵ 0.9920, n_D²⁰ 1.5510, n_D²⁵ 1.5511; di(cyclopentytetralin) (V), b.p. 178-5-81°, solidifies at -60°, d₄²⁰ 1.0132, d₄²⁵ 1.0181, n_D²⁰ 1.5597, n_D²⁵ 1.5510; and 2 fractions, b.p. 123-5° and 161-20°, resp., contg. probably isomers of IV. When IV is condensed with 1 cryst. tri(cyclopentyltetralin), m.p. 115-16°, is obtained, and also a liquid isomer, b.p. 218-22°, solidifies at -17°, d₄²⁰ 0.9233, n_D²⁰ 1.5570, n_D²⁵ 1.5500, and solidifies at -17°, d₄²⁰ 0.9233, n_D²⁰ 1.5570 (2 mm.). Hydrogenation of III yields cyclopentylidene(VI), m.p. -1.8°, b.p. 118-220° (I), d₄²⁰ 0.9238, d₄²⁵ 0.9280, n_D²⁰ 1.4981, n_D²⁵ 1.4965. Hydrogenation of IV gives di(cyclopentylidene), b.p. 170-2°, d₄²⁰ 0.9022, d₄²⁵ 0.9081, n_D²⁰ 1.5128. The reaction of the hydrocarbons with 100% H₂SO₄ at 20° has been investigated. V did not react whereas the other hydrocarbons reacted rather readily. The solvs. in levulinic and pyruvic acids was dist. All hydrocarbons were easily sol. in dichloroethylene. Gertrude Berend.

Gertrude Herend.

Some polycyclic homologs of naphthalene and tetralin.
E. S. Pokrovskaya and T. G. Stepanitsva. *J. Gen. Chem.* (U. S. S. R.) 9, 1953-60(1939).—Some condensation products of cyclohexene (I) with naphthalene (II) and tetralin (III) in the presence of $AlCl_3$ are described. To a soln. of 200 g. II in 60 g. CS_2 are added slowly while stirring and cooling 26 g. anhyd. $AlCl_3$ and an equimol. amt. of I. The stirring is continued for 15-20 mins., the reaction mixt. is treated with H_2O , and CS_2 distd. off. The benzene ext. of the reaction products is treated with HCl and alkali, dried and distd. From the fraction b.p. 170-80°, β -cyclohexylnaphthalene (IV), m. 31°, d_4^{20} 1.0074, d_4^{25} 1.0049, n_D^{20} 1.5025, n_D^{25} 1.07187, n_D^{30} 0.03949, n_D^{35} 0.02352, is isolated whereas the fraction b.p. 154-6° consists of a

mixt. of IV and another liquid hydrocarbon (V). Fraction b.p. 190-230° gives *dicyclohexylnaphthalene* (VI), m. 150-1°, and a liquid isomer, b.p. 203-6°, d_4^{20} 1.0399, d_4^{25} 1.0252, n_D^{20} 1.6019, n_D^{25} 1.5046, n_D^{30} 1.0740, n_D^{35} 0.5291, n_D^{40} 0.1525. Fraction b.p. 230-70° gives *tricyclohexylnaphthalene*, m. 121-2°, and fraction b.p. 270-320° gives *tetracyclohexylnaphthalene*, m. 200°. Dehydrogenation of the mixt. of IV and V gives 2-phenylnaphthalene or methylcyclopentyl-naphthalene. Dehydrogenation of VI gives a new diphenylnaphthalene. To 200 g. III in CS_2 are added 20 g. $AlCl_3$ and 40 g. I while cooling. The reaction product after appropriate treatment is subjected to fractional distn. Fraction b.p. 145-70° gives *cyclohexytetralin* (VII), b.p. 147-148°, d_4^{20} 0.9801, d_4^{25} 0.9630, n_D^{20} 1.5400, n_D^{25} 1.5120, n_D^{30} 0.8310, n_D^{35} 0.0890, n_D^{40} 0.0601, n_D^{45} 0.0437, n_D^{50} 0.0288. Fraction b.p. 108-200° contains *dicyclohexyldetralin*, consisting probably of 2 or more isomers. Hydrogenation of VII in the presence of a Pt catalyst at 170-80° gives a mixt. of α - and β -cyclohexyldetralin, the mixt. showing b.p. 139-41°, d_4^{20} 0.9336, d_4^{25} 0.9354, n_D^{20} 1.5018, n_D^{25} 0.4708, n_D^{30} 0.0351. The cyclohexyl derivs. of II, III and decalin prepd. when subjected to the action of H_2SO_4 react more or less readily with the formation of sulfuration products. IV, VI and VII are easily sol. in aniline at room temp. (C. H.)

SHIMANKO, N.A.; POKROVSKAYA, Ye.S.; SIDORENKO, V.I.

Synthesis and ultraviolet absorption spectra of decylxylenes,
decylmesitylene, and cyclopentyldecyl-p-xylene. Neftekhimia 1
no.3:297-304 My-Je '61. (MIRA 16:11)

1. Institut neftekhimicheskogo sinteza AN SSSR.

POKROVSKAYA, Ye.S.; SHIMANKO, N.A.

Hexadecylxylenes and hexadecylmesitylene. *Neftekhimiya* 2 no.5:
657-661 8-0 '62. (MIRA 16:1)

1. Institut neftekhimicheskogo sinteza AN SSSR.
(Xylene). (Mesitylene).

KUSAKOV, M.M.; POKROVSKAYA, Ye.S.; SHISHKINA, M.V.; SHIMANKO, N.A.;
PROKOF'YEVA, Ye.A.

Study of the structure of monocyclic hydrocarbons based on absorption spectra. Izv. AN SSSR.Ser.fiz. 26 no.10:1257-1260 0 '62. (MIRA 15:10)

1. Institut neftkhimicheskogo sinteza AN SSSR.
(Hydrocarbons--Spectra)

1. POKROVSKAYA, Ye S., STEPANTSEVA, T. G.

2. USSR (600)


"On Certain Polycyclic Homologs of Naphthalene and Tetralene", Zhur. Obshch. Khim., 9, No. 21, 1939.
Inst. of Mineral Fuels, Acad. of Sci. USSR.
Received 8 June 1939.

9. [REDACTED] Report U-1626, 11 Jan 1952.

1. POKROVSKAYA, Ye. S. SUSLOV, R. Ya.

2. USSR (600)

"Naphthene-Aromatic Hydrocarbons of the Naphthalene and
Tetraline Series Having a Cyclopentyl Ring in a Side-Chain",
Zhur. Obshch. Khim., 9, No. 24, 1939.
Inst. of Mineral Fuels, Acad. of Sci. USSR.
Received 16 July 1939

9.  Report U-1626, 11 Jan 1952.

[illegible]

1ST AND 2ND CROST										3RD AND 4TH CROST									
PROCESSES AND PROPERTIES INDEX																			
<p><i>ca</i></p> <p>Synthesis of polycyclic compounds. I. Hydrocarbons of the 1-methylcyclopentyl-naphthalene series. E. S. Pokrovskaya, <i>J. Gen. Chem.</i> (U. S. S. R.) 13, 679-R1 (1943) (English summary).—Condensation of 1-C₁₁H₁₅Me (I) with cyclopentene (II) with AlCl₃ yields 1-methylcyclopentyl-, 1-methyldicyclopentyl- and 1-methyltricyclopentyl-naphthalenes. I (80 g.) and 15 g. II with 8 g. AlCl₃, reacted with ice-water cooling, yielded 80 g. of oil, b_p 130–250°, from which was isolated after repeated distn. 1-methylcyclopentyl-naphthalene, b_p 150–8°, d₄²⁰ 1.0358, n_D²⁰ 1.6088. The products of 3 runs of 30 g. I, 30 g. II and 11 g. AlCl₃ in benzene were combined and fractionated to yield: 1-methyldicyclopentyl-naphthalene, b_p 197–9°, d₄²⁰ 1.0358, n_D²⁰ 1.6023, mixed isomers of methyldicyclopentyl-naphthalene, b_p 192–7°, and an isomer mixt. of 1-methyltricyclopentyl-naphthalenes, b_p 233–5°, n_D²⁰ 1.5973. The fractions contg. methyldicyclopentyl- and methyldicyclopentyl-naphthalenes were further condensed with AlCl₃ catalyst in benzene with II to yield an isomer of 1-methyltricyclopentyl-naphthalene, b_p 250–60°, which was crystd. from iso-PrOH to yield a colorless powder m. 97°. 1-Methylcyclopentyl-naphthalene was hydrogenated by platinumized charcoal at 180–200° for 70 hrs. to yield, after treatment with 100% H₂SO₄, 1-methylcyclopentyl-decalin, b_p 130–2°, d₄²⁰ 0.9339, n_D²⁰ 1.5006. G. M. Kosolapoff</p>																			
A.S.T.A. METALLURGICAL LITERATURE CLASSIFICATION																			
FROM SYNONYM										FROM SYNONYM									
1ST AND 2ND CROST										3RD AND 4TH CROST									

Some homologs of cyclopentyl- and cyclohexylbenzene and products of their hydrogenation. R. S. Pokrovskaya. *Compt. rend. acad. sci. U. R. S. S.* 39: 264 (1953); *cf. C. A.* 35, 7389. — Condensation of cyclopentene and cyclohexene with aromatic hydrocarbons was carried out in the cold in the presence of $AlCl_3$. 2-Cyclopentylstyrene (I), b_p 276-6.5°, d_4^{20} 0.9485, n_D^{20} 1.5325. Isopropylcyclopentylbenzene (II), b_p 266.5-7.5°, d_4^{20} 0.9223, n_D^{20} 1.5190. *ar*-Cyclopentyl-*p*-xylene (III), b_p 121-2°, d_4^{20} 0.9227, n_D^{20} 1.5219. 2,6-Dicyclopentylstyrene (IV), b_p 164-5°, d_4^{20} 0.9470, n_D^{20} 1.5327. *ar*-Cyclohexylstyrene (V), b_p 261-2°, d_4^{20} 0.9353, n_D^{20} 1.5350. *ar*-*ar*-Dicyclohexylstyrene (VI), b_p 165-6°, d_4^{20} 0.9445, n_D^{20} 1.5378. *ar*-Cyclopentyltoluene (VII), b_p 237.5°, d_4^{20} 0.9401, n_D^{20} 1.5357. *ar*-*ar*-Dicyclopentyltoluene (VIII), b_p 180-2°, d_4^{20} 0.9394, n_D^{20} 1.5391. 2-Cyclopentyl-*p*-xylene (IX), b_p 264.5-5°, d_4^{20} 0.9414, n_D^{20} 1.5291. The crit. aniline points of I-IX were below 15°. I-V and VII, VIII m. below -60°; VI m. -3°; IX m. -44°. The viscosities in centistokes at 20° and 100° are I 6.26, 1.29; II 3.76, 1.11; III 6.26, 1.29; IV 258.92, 5.29; V 4.08, 1.11; VI 583.33, 8.86; VII 2.29; VIII 15.70, 2.14; IX 2.52. — (some viscosities at 10°, 50°, and 70° also given). I, III, and VI were hydrogenated at 180-190° with Pt on an activated charcoal catalyst, giving 1,2,5-trimethyl-2-cyclopentylcyclohexane b_p 264-5°, d_4^{20} 0.8771, n_D^{20} 1.4766; 1-methyl-6-isopropylcyclopentylcyclohexane b_p 271-3°, d_4^{20} 0.8768, n_D^{20} 1.4771; methylcyclohexylcyclohexane b_p 263-3°, d_4^{20} 0.8768, n_D^{20} 1.4766. The max. aniline points of the hydrogenated compds. were 50°, 63.7°, and 85.5°, resp. It was noted that the mono- and dicyclopentyltoluenes have higher d_4 and n_D but lower viscosities than the corresponding cyclohexyltoluenes.

R. S. Pokrovskaya

POKROVSKAYA, Ye. S.

Mbr., Petroleum Inst., Dept. Tech. Sci., Acad. Sci., -1943-c49-.

Cand. Chemical Sci. Mbr., Inst. Combustible Minerals, Dept.

Tech. Sci., Acad. Sci., -1943-48-. "Some Homologues of Cyclopentyl-

and Cyclohexyl-Benzene and Products of Their Hydrogenation,"

Dok. AN. 39, No. 1, 1943; "Synthesis of Polycyclic Hydrocarbons:

I. Hydrocarbons of the Series of Methylcyclopentyl-Naphthalene,"

Zhur. Obshch. Khim., 13, Nos. 7-8, 1943; "Question of the

Synthesis and the Derivatives of Cyclopentyl- and Cyclohexyl-

Replaced Aromatic Hydrocarbons," *ibid.*, 61, No. 6, 1948; "Hydrocarbons

of the Naphthalene Series in Surakhany Petroleum," *ibid.*, 67,

No. 5, 1949. S. S. Nametkin Prize, 1951, oil refining research.

POKROWSKAJA, E. S.

"The synthesis of polycyclic hydrocarbons. II. Hydrocarbons of α -methyl-cyclohexyl-naphtalene series" by E. S. Pokrowskaja (p. 438)

SO: Journal of General Chemistry (Zhurnal Obshchei Khimii) 1946, Volume 16, No.3

CA

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Hydrocarbons of the cyclohexylindan series. E. S. Pokrovskaya and T. G. Stepanova (Instit. Combustible Minerals, Acad. Sci. U.R.S.S.) *Compt. rend. acad. sci. U.R.S.S.* 55, 829-31(1947); cf. Padua, C.A. 3, 1898. The synthesis of and properties of cyclohexylindan (I), di-cyclohexylindan (II), and tricyclohexylindan (III) are described. Indan (IV) was prepd. from indene by hydrogenation with a Ni catalyst (prepd. by reduction of com. Ni oxide at 380°). IV was alkylated with cyclohexane (V) in 2:1 ratio in the presence of AlCl₃ in an ice bath to give 25% I, b. 130-1°, f.p. 2.5°, d₄²⁰ 0.9877, d₄²⁵ 0.9807, n_D²⁰ 1.5460, n_D²⁵ 1.5330, 4.90, 2.91, and 1.65 centipoises at 20°, 50°, 70°, and 100°; and II, b. 178-9°, d₄²⁰ 0.9795, d₄²⁵ 0.9723, n_D²⁰ 1.5510, n_D²⁵ 1.547, 106, 72, 36, 20.9, and 13 centipoises at 50°, 60°, 70°, 80°, 90°, and 100°. When the ratio of IV:V was 1:1 there was obtained 31% II and III, m. 115° (from acetone), b. 230-40°. W. S. Port

ASAC-SEA METALLOGICAL LITERATURE CLASSIFICATION

USSR/Chemistry - Cycloalkylation of Aug 48
Aromatic Hydrocarbons

Chemistry - Synthesis

"The Problem Concerning the Synthesis and Derivatives of Cyclopentyl- and Cyclohexyl-Substitution Derivatives," Acad. S. S. Nemetkin Ye. S. Pokrovskaya
2 pp

"Dok Ak Nauk SSSR" Vol LXI, No 6

PA 25/1077

Continuing previous research on cycloalkylation of aromatics, cyclopentylbenzene, and cyclohexylbenzene, sulfonated with 1 volume of 100% sulfuric acid, the isolated sulfonic acids were converted by treatment with barium carbonate into their barium salts
FDB 35/4973

USSR/Chemistry - Cycloalkylation, of Aug 48
Aromatic Hydrocarbons (Contd)

(insoluble in alcohol and ether) and, with soda, in-
to their sodium salts. Submitted 2 Jul 48.

POKROVSKAYA, YE. S.
FDB

35/4973

CA

10

Naphthalene series hydrocarbons of Sarakhan petroleum. S. S. Nametkin, E. S. Pokrovskaya, and T. G. Stepanova. *Doklady Akad. Nauk S.S.S.R.* 67, 847-50 (1949).—Fractionation and conversion to the picrates was used to detect the following hydrocarbons: $C_{10}H_8$, picrate, m. 149° (from EtOH); 2-Me $C_{10}H_7$, picrate, m. 116° (from EtOH), contg. some 1-isomer; 1,6-Me $C_{10}H_6$, picrate, m. 113°, free hydrocarbon, b. 263-5°, d_4^{20} 1.0013, n_D^{20} 1.6053, f.pt. -16° to -18°. The products are obtainable from fractions b. 190-252°.

G. M. Kosolapoff

1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
PROCESSES AND PROPERTIES INDEX																			
<p>F</p> <p>208. HYDROCARBONS OF NAPHTHALENE SERIES IN SURAKHANY PETROLEUM. Nemetkin, S. S., Pokrovskaya, E. S. and Stepantseva, T. G. (Doklady Akademi Nauk S.S.S.R. (Rep. Acad. Sci. U.S.S.R.), 1949, vol. 68, (5), 847-850). (L).</p>																			
ASD-SLA METALLURGICAL LITERATURE CLASSIFICATION										FROM SOURCE									
FROM SOURCE										FROM SOURCE									

POKROVSKAYA, E.S.

Homologs of cyclopentyl- and cyclohexylbenzene and their hydrogenation products. E. S. Pokrovskaya. *Trudy Inst. Nefti, Akad. Nauk S.S.S.R.*, No. 2, 284-76 (1950); cf. *C.A.* 38, 4578; 39, 702; 41, 7444. Alkylation of benzene homologs with cyclopentene and cyclohexene in the cold and in the presence of anhyd. AlCl_3 yielded the corresponding naphthenic deriva. Compds. described are: cyclopentyltoluene (I), b_m 237.5°, f.p. below -50°, d_4 0.9401, n_D^{20} 1.5287; cyclopentyl-*p*-xylene (II), b_m 254.5-5°, f.p. -44°, d_4 0.9414, n_D^{20} 1.5291; cyclopentyl-mesitylene (III), b_m 278-8.5°, f.p. below -50°, d_4 0.9435, n_D^{20} 1.5325; cyclopentylcumene (IV), b_m 265.5-7.5°, f.p. below -50°, d_4 0.9222, n_D^{20} 1.5190; cyclopentyl-*p*-cymene (V), b_m 121-2°, f.p. below -50°, d_4 0.9227, n_D^{20} 1.5219; cyclohexyltoluene (VI), b_m 261-2°, f.p. below -60°, d_4 0.9353, n_D^{20} 1.5250; dicyclopentyltoluene (VII), b 150-2°, f.p. below -50°, d_4 0.9694, n_D^{20} 1.5391; dicyclohexyltoluene (VIII), b 165-0°, f.p. -3°, d_4 0.9645, n_D^{20} 1.5378; dicyclopentylmesitylene (IX), b 164-5°, f.p. below -50°, d_4 0.9870, n_D^{20} 1.5527. Except for compds. II, III, and IX the position of the cyclic substituent has not been established. Viscosities (centistokes) at 20° and 100° are: I, 2.29, 1.00; II, 3.52, 1.03; III, 6.28, 1.30; IV, 4.82, 1.11;

V, 6.28, 1.29; VI, 4.05, 1.11; VII, 15.70, 2.14; VIII, 5.53, 5.56; IX, 258, 5.39. Partial viscosity data given also for 10°, 30°, 50°, and 70°. Attempts to introduce more than 2 cyclopentyls into mesitylene were unsuccessful. In higher-temp. expts. the cyclopentene was apparently polymerized. It is concluded from this and earlier work that alkylation with cyclopentene proceeds further than with cyclohexene. Hydrogenation of III, V, and VI proceeded smoothly over a Zelinsky Pt-C catalyst to yield, resp., 1,3,5-trimethyl-2-cyclopentylcyclohexane (X), b_m 252-3°, d_4 0.8771, n_D^{20} 1.4766, max. aniline point 50.09°; cyclopentyl-hexahydro-*p*-cymene (XI), b_m 271-3°, d_4 0.8705, n_D^{20} 1.4771, max. aniline point 63.1°; and methylcyclohexylcyclohexane (XII), b_m 252-3°, d_4 0.8763, n_D^{20} 1.4705, max. aniline point 65.5°. Hydrogenation of IV yielded an impure product contg. a greater H/C ratio than theoretical for $\text{C}_{11}\text{H}_{20}$. It was observed that hydrocarbons contg. cyclopentyl group have a greater d and n but lower viscosity than the corresponding compds. contg. the cyclohexyl group.

John A. Krynsky

POKROVSKAYA, E. S.

Hydrocarbons of the cyclohexylindan series. E. S. Pokrovskaya and T. G. Stepaniseva. *Trudy Inst. Khim. Akad. Nauk S.S.S.R.*, No. 2, 303-310 (1950). — Alkylation of indan (I) with 0.5 mol. equiv. of cyclohexene (II) in the cold and in the presence of anhyd. $AlCl_3$ yielded β -cyclohexylindan, b_p 130-1°, m. 2.5°, d₄ 0.9877, d₂₀ 0.9307, n_D 1.5480, max. aniline point < -10° (III) and β,β -dicyclohexylindan (IV), b_p 178-0°, d₄ 1.0011, d₂₀ 0.9458, n_D 1.5510, max. aniline point 0°. Equimolar reaction of I and II yielded more IV and tricyclohexylindan (V) (probably the 4,5,6-isomer) white crystals, m. 115° (from acetone). IV, glasslike, began to crystallize on standing 8 months. Abs. centipoise and kinematic centistoke viscosities data are given for III and IV at temps. from 20 to 100°. III with H_2SO_4 gave the corresponding sulfonic acid. I was prepd. in good yield and free from hydroindan by passing indene and H through an open tube at 215-20° contg. a Ni catalyst which in turn was prepd. by reducing NiO at 380°. A comparison of III and IV with analogous cyclopentyl derivs. of Tetralin shows that the indan compds. have a lower d. and n, but a higher viscosity. J. A. K. /

AT 234

CA 10

Hydrocarbons of the naphthalene series in Maikop petroleum. S. S. Nametkin, E. S. Pokrovskaya, and T. G. Stepanova. *Doklady Akad. Nauk S.S.S.R.* 73, 715-17 (1950).--By the picrate method of sepn. and identification of hydrocarbon fractions (C.A. 44, 10415) it was shown that the kerosene fraction of Maikop petroleum contains appreciable amts. of $C_{14}H_{10}$, 1- and 2-Me $C_{14}H_{10}$, 1,6- and 1,7-Me $C_{14}H_{10}$, and 1,2,6-Me $C_{14}H_{10}$, as well as higher homologs of $C_{14}H_{10}$ and other polycyclic compds. in the higher fractions, b. 300-40° and 310-20°, from which a picrate, m. 134-0.5°, possibly that of a $C_{14}H_{10}Me_2$, was isolated; a small amt. of some polycyclic compd., contg

* 93.2% C and 6.2% H and m. 92-4°, was also obtained from the highest fraction. G. M. Kosolapoff

1ST AND 2ND EDITIONS										PROCESSING AND PRESENTATION INDEX										3RD AND 4TH EDITIONS									
<p>F 189. CHARACTERIZATION OF AROMATIC HYDROCARBONS FROM EMBA PETROLEUM. J</p> <p>Nametkin, S. S., Pokrovskaya, E. S. and Stepantseva, T. G. (Doklady Akad. Nauk SSSR (Rep. Acad. Sci. U.S.S.R.), 1950, vol. 74, 69-71; abstr in Chem. Abstr., 1951, vol. 45, 2183). Kerosine fraction of Emba petroleum revealed no $C_{10}H_8$ or homologues in the material from the Dossorsk region, only minute amounts of possible $C_{10}H_8$ homologues being present in the 230-240° fraction; some condensed aromatic hydrocarbons are apparently present in higher cuts: B. 270-280° and b₂ 130-150°. Neither $C_{10}H_8$ nor its homologues are present in the kerosine fractions from the Makat region. C.A.</p>																													
<p>ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>																													
<p>3RD EDITION</p>										<p>3RD EDITION</p>										<p>3RD EDITION</p>									
<p>1ST EDITION</p>										<p>1ST EDITION</p>										<p>1ST EDITION</p>									

22

CA

Hydrocarbons of the naphthalene series in Gruzian paraffin petroleum. E. S. Polkovskaya. *Doklady Akad. Nauk S.S.S.R.* 81, 203-3 (1961).--Fractionation and purification through the picrates showed the presence of: $C_{10}H_8$, 2-Me- $C_{10}H_7$, 1-Me- $C_{10}H_7$, 1,6- and 1,7-Me- $C_{10}H_6$, 1,2,7-Me- $C_{10}H_5$, 1,2,5,6- and 1,2,4,8-Me- $C_{10}H_4$. G. M. Kosolapoff

POKROVSKAYA, YE. S.

USSR/Chemistry - Petroleum

Jul 52

"The Content of Hydrocarbons of the Naphthalene Series in Maykop, Tuymazy, and Dossor Crudes," Acad S. S. Nemetkin (deceased), Ye. S. Pokrovskaya, T. G. Stepanseva

PA 243T5
"Trudy Inst Nefti" Vol 2, pp 10-16

The kerosene fraction from Maykop crude (tertiary deposits) contains considerable quantities of naphthalene, 3-methylnaphthalene, 1,6 and 1,7-dimethylnaphthalenes, trimethylnaphthalenes, higher homologs of naphthalene, and other polycyclic hydrocarbons of a more complex structure. The kerosene fraction of

243T5

Tuymazy crude (Devonian deposits of Second Baku) does not contain naphthalene itself, but some of its homologs. These homologs are precipitated as picrates together with polycyclic sulfur compounds when the picric acid method of separation is used. The kerosene fraction of Dossor crude (Jurassic deposits, Emba region) does not contain noticeable quantities of naphthalene or its homologs.

243T5

POKROVSKAYA, Ya. S.

Investigation of hydrocarbons of the naphthalene series in kerosene
fractions of petroleum by means of an accelerated picrate method.
Trudy Inst.nefti 4:47-57 '54. (MLRA 8:1)
(Hydrocarbons) (Kerosene)

PERROVSKAYA, Ye. S.

PRIKHOT'KO, A. F.

24(7)

p 3

PHASE I BOOK EXPLOITATION SOV/1365

L'vov. Universytet

Materialy X Vsesoyuznogo soveshchaniya po spektroskopii. t. 1: Molekulyarnaya spektroskopiya (Papers of the 10th All-Union Conference on Spectroscopy. Vol. 1: Molecular Spectroscopy) [L'vov] Izd-vo L'vovskogo univ-ta, 1957. 499 p. 4,000 copies printed. (Series: Its: Fizichnyy zbirnyk, vvp. 3/8/)

Additional Sponsoring Agency: Akademiya nauk SSSR. Komissiya po spektroskopii. Ed.: Jazer, S.L.; Tech. Ed.: Saranyuk, T.V.; Editorial Board: Landsterg, G.S., Academician (Resp. Ed., Deceased), Noprent, B.S., Doctor of Physical and Mathematical Sciences, Pabulinskiy, I.L., Doctor of Physical and Mathematical Sciences, Pabulinskiy, V.A., Doctor of Physical and Mathematical Sciences, Kornitskiy, V.G., Candidate of Technical Sciences, Rayakiy, S.M., Candidate of Physical and Mathematical Sciences, Klimovskiy, L.K., Candidate of Physical and Mathematical Sciences, Miliyanchuk, V.S., A. Ye., Candidate of Physical and Mathematical Sciences.

Card 1/30

Gordadze, G.S. Anharmonicity of the Potential Curve of a Hydrogen Molecule

317

Kusakov, M.M., S.S. Mifontova, Ye. S. Polkovnikova, et al. Study of the Structural-group Composition of Kerosene Fractions by Means of the Absorption Spectra in the Near Ultraviolet Region

321

Iogansen, A.V. Structural-group Analysis of Saturated Petroleum Products by Means of Infrared Absorption Spectra. Determination of CH_3 -groups, Aliphatic CH_2 -groups and Long Chains, $(\text{CH}_2)_n$

327

Gal'pern, G.D., A.N. Kislinskiy, I.A. Musayev, et al. Study of the Composition of Benzene-ligroin Fractions by Means of Combined Dispersion Spectra

329

Gal'pern, G.D., M.M. Kusakov, Ye. S. Polkovnikova, et al. Study of the Absorption Spectra of Some Petroleum Aromatic Hydrocarbons in the Near Ultraviolet and Infra-red Regions

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Card 21/30

KUSAKOV, M.M.; NIFONTOVA, S.S.; ~~POKROVSKAYA, Ye.S.~~; ROZENBERG, L.M.;
TOPCHIEV, A.V.; SHISHKINA, M.V.

Absorption spectrum study in the near ultraviolet region of the
structure and group composition of the kerosene fraction. Fiz.
sbor. no.3:321-326 '57. (MIRA 11:8)

1. Institut nefti AN SSSR.
(Kerosene—Spectra)

POKROVSKAYA, Ye.S.

Naphthalene series hydrocarbons in the kerosene fraction of
petroleum (study by the picrate method). Trudy inst. nefti.
10:38-58 '57. (MIRA 11:4)
(Naphthalene) (Kerosene)

POKROUSKAY A, Y. S.

- 3(2) 21(4) - - - - - KAZAN I DOX KAZAN I DOX 207/222
- Academy of Sciences, USSR. Institute of Petroleum, 1956. 12 (Transactions of the Petroleum Institute, USSR. Academy of Sciences, Vol. 12) Moscow, Izdatro AN SSSR, 1956. 395 p. Kireta slip inserted, 1,700 copies printed.
- M. I. S. R. Sergiyenko, Professor, Ed. of Publishing House: K. O. Klymenko, Tech. Ed., V. V. Golubova.
- PREFACE: This book is intended for scientists, engineers, and technicians in the petroleum industry.
- CONTENTS: This collection of articles describes the results of studies on the chemistry and technology of petroleum and gas conducted in the laboratories of the Institute of Petroleum, USSR, in 1956 and 1957. A new section "Petroleum Synthesis and Technology of Petroleum" has been included in the collection of articles. A list of investigations published by the Institute of Petroleum in 1956 and 1957 and a list of dissertations for the Doctor's and Candidate's degrees presented in 1956 and 1957 at open sessions of the Academic Council of the Petroleum Institute, Academy of Sciences, USSR, are given.
- R. Kh. Izhakov, P. V. Korenevskaya, I. A. Mavry, and T. I. Shchekin. Chapter 1. The Activity of Silica Gel in the Chromatographic Separation of Hydrocarbons 25
- Gal'pern, G. D., M. K. Rukhlov, Ya. B. Fokunskaya, and R. A. Shvachko. Study of the Absorption Spectra of Some Cyclohexyl and Cyclopentyl Benzenes Derivatives in the Near Ultraviolet Region 38
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- Sergiyenko, S. R., and Ye. V. Lebedev. Chemical Nature of Saturated High-Molecular Weight Hydrocarbons of Nakhshkovo Petroleum. Part 18 117
- Sergiyenko, S. R., I. A. Koshkina, and Ye. V. Lebedev. Investigation of the Chemical Nature of High-Molecular Weight Condensed Dicyclic Aromatic Compounds of Nakhshkovo Petroleum by the Catalytic Hydrogenation Method in the Presence of Raney Ni. Part 20 136
- Sergiyenko, S. R., Ye. V. Rozdina, and I. A. Koshkina. Hydrogenation of High-Molecular Weight Condensed Dicyclic Aromatic Compounds of Nakhshkovo Petroleum in the Presence of a $W_2 - Mo - Al_2O_3$ Catalyst under Mild Conditions. Paper 21 147
- Sergiyenko, S. R., I. A. Koshkina, and Ye. V. Rozdina. Hydrogenation of Tars Isolated from Nakhshkovo Petroleum. Paper 22 156
- Sergiyenko, S. R., V. I. Korshakina, P. M. Galich, L. I. Pechen, B. E. Derydov, and M. I. Krasvobok. Effect of the Nature of the Raw Material on the Composition and Properties of Heavy Residual Petroleum Fraction. Part 23 163
- Sergiyenko, S. R., V. I. Korshakina, P. M. Galich, L. I. Pechen, B. E. Derydov, and M. I. Krasvobok. Effect of the Nature of the Raw Material and Oxidation Time on the Composition and Properties of Oxidized Bitumens. Article 24 175

5.3100

67218

Translation from: Referativnyy Zhurnal Fizika, 1959, Nr 7, p 271 (USSR) SOV/58-59-7-16560

AUTHORS: Gal'perin, G.D., Kusakov, M.M., Pokrovskaya, Ye.S., Shimanko, N.A.

TITLE: Study of the Absorption Spectra of Some Cyclohexyl and Cyclopentyl Derivatives of Benzene in the Near Ultraviolet Region

PERIODICAL: Tr. In-ta nefti. AS USSR, 1958, Vol 12, pp 38 - 64

ABSTRACT: The authors studied the absorption spectra of a number of cyclohexyl and cyclopentyl derivatives of benzene and its methylated homologs in a solution of isooctane in the 2,200 to 2,900 Å region. They demonstrated the possibility of determining the position of alicyclic substitutes in the benzene ring. In some cases it is possible to identify isomers of identical structure with cyclohexyl, cyclopentyl, methyl, or both methyl and cyclic substitutes. The advantages of the described method of studying structure, as compared with the chemical method, are its simplicity, the possibility of carrying out measurements in the liquid phase and at room temperature, and the small size of the sample required for analysis (hundredths of a gram).

Card 1/1

L. Dmitrenko

AUTHORS: Topchiyev, A. V., Member, Academy of Sciences, USSR, 20-119-6-31/56
Pokrovskaya, Ye. S., Stepantseva, T. G.

TITLE: The Synthesis of Alkylindanes (Sintez alkilindanov)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol. 119, Nr 6, pp. 1164-1166 (USSR)

ABSTRACT: In order to begin the complicated investigation of the composition of the petroleum- and mineral oil fraction with regard to hydrocarbons, first of all, hydrocarbons in a pure state are to be produced and universally studied, which correspond to the mentioned fractions according to their boiling. Among the possibly occurring aromatic hydrocarbons the indanes are entirely insufficiently investigated. Then follow some examples of the hitherto known data on this subject (Ref 1). In order to complete these informations the authors tried the synthesis of the indanes for the purpose of obtaining preparations for spectral analysis. Those were, above all, the substances mentioned in the title with aliphatic substituents in the aromatic ring. A survey of publications

Card 1/3

5(3)

AUTHORS:

Pokrovskaya, Ye. S., Shimanko, N. A.

SOV/20-123-1-29/56

TITLE:

On the Synthesis of Cyclopentyl- and Cyclohexyl Derivatives of Mesitylene (K voprosu o sinteze tsiklopentil- i tsiklo-geksilzameshchennykh mezitilenov)

PERIODICAL:

Doklady Akademii nauk SSSR, 1958, Vol 123, Nr 1, pp 109 - 112 (USSR)

ABSTRACT:

The introduction of the cyclopentyl and cyclohexyl group in the aromatic ring is mostly proceeding smoothly and with good yield by the interaction of cyclopentene and cyclohexene with aromatic hydrocarbons in the presence of anhydrous aluminum chloride (Ref 1). Aluminum chloride, however, in the case of some alkyl benzenes effects the isomerization of the initial aromatic hydrocarbon. In order to obtain the cyclopentyl mesitylene without isomerization of the initial product the authors have alkylated the mesitylene with cyclopentene in the presence of concentrated sulfuric acid. The reaction mixture was cooled down. The compound isolated from it had a

Card 1/3

On the Synthesis of Cyclopentyl- and Cyclohexyl Derivatives SOV/20-123-1-29/56
of Mesitylene

melting point of $100.5 - 101.5^{\circ}(3 \text{ mm})$ and $266-267^{\circ}(755 \text{ mm})$. Regarding its properties the obtained hydrocarbon differs from the trimethyl cyclopentyl benzene with a durol-type structure (obtained without sulfuric acid, Fig 1, I). The same applies to the absorption spectrum (Fig 1, IV). Its spectrum is similar to that of isoduro (Fig 2, I). This means that the isomerization does not occur during the condensation with sulfuric acid and that the hydrocarbon synthesized is a cyclopentyl- mesitylene (1,3,5-trimethyl-4-cyclopentyl benzene). In order to obtain the cyclohexyl mesitylene, mesitylene was alkylated with cyclohexene in the presence of anhydrous aluminum chloride under cooling with ice. The absorption spectrum of the reaction product was similar to that of durol. Even in spite of the ice-cooling the isomerization takes place. Synthesized was the 1,2,4-trimethyl-5-cyclohexyl benzene. With sulfuric acid and ice-cooling the 1,3,5-trimethyl-2-cyclohexyl benzene was formed. It differed from the cyclohexyl pseudo-cumol previously described. The melting points of the mentioned compounds

Card 2/3

POKROUSKAYA, Y.E.S

PHASE I BOOK EXPLOITATION

SOV/4606

Akademiya nauk SSSR. Institut nefti

Khimiya nefti (Petroleum Chemistry) Moscow, 1959. 311 p. (Its: Trudy, tom 13) Errata slip inserted. 2,000 copies printed.

Resp. Ed.: G.D. Gal'pern, Doctor of Chemical Sciences; Ed. of Publishing House: L.S. Povarov; Tech. Ed.: V.V. Volkova.

PURPOSE: This book is intended for organic and industrial chemists and specialists in petroleum technology.

COVERAGE: This issue of the Transactions of the Petroleum Institute of the Academy of Sciences USSR contains twenty-five articles which review original laboratory experiments conducted by personnel of the Otdel khimii i tekhnologii nefti (Department of Chemistry and Petroleum Technology). Individual papers deal with studies of the composition and properties of petroleum and petroleum products, methods of their separation and synthesis, and physicochemical characteristics of standard petroleum compounds. The use of gaseous solutions to distinguish heavy raw-petroleum fractions from ozocerites, thermal processes of contact and catalytic refining and synthesizing, and theoretical problems

~~Card 1/6~~

POKROVSKAYA, Ye.S.

Alkylation of alkylbenzenes by some olefins and cyclopentene.

Trudy Inst.nefti 13:5-10 '59.

(MIRA 13:12)

(Benzene)

(Alkylation)

POKROVSKAYA, Ye.S.

Synthesis of ethylindane by alkylation with ethyl bromide. Trudy
Inst. nefti 13:29-32 '59. (MIRA 13:12)
(Indan) (Ethane)

5(3)

AUTHORS: Pokrovskaya, Ye. S., Shishkina, M. V. SOV/20-125-6-26/61

TITLE: On Some Alkyl-cyclopentyl-benzenes (0 nekotorykh alkiltsiklopentilbenzolakh)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 125, Nr 6, pp 1269-1271 (USSR)

ABSTRACT: It was proved (Refs 1-3) that complex polyalkyl-benzenes which contain besides alkyl radicals also cycloalkyl radicals can be produced by the alkylation of methyl- and polymethyl benzenes with cyclopentene or cyclohexene in the presence of anhydrous aluminum chloride. The synthesis of dimethyl-isopropyl-benzene is described in the present paper. The authors proceeded from p-xylene and propylene in the presence of the same catalyst; furthermore, the obtained trialkyl-benzene-isopropyl-p-xylene is alkylated by cyclopentene. The position of the side chains was determined according to the absorption spectra in the ultraviolet range as far as an isomerization is possible in the presence of aluminum chloride. The constants of isopropyl-p-xylene agree with those listed in reference 4. A reaction prescription and the properties of p-xylene as initial substance are given. A substance with the boiling point of 75° (at 11 torr)

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On Some Alkyl-cyclopentyl-benzenes

SOV/20-125-6-26/61

was obtained by fractional distillation at atmospheric pressure. It does not freeze at -70° . The refractive index and the density correspond completely to those of 1,4-dimethyl-2-isopropyl-benzene (Ref 4). Figure 1 shows the spectrum of isopropyl-p-xylene (Figs 1: I) with maxima at 2755 and 2670 Å. The spectrum of pseudocumene (Ref 6) is plotted for comparison. The rather similar values of the lengths of the absorption maxima waves and their intensities in both spectra as well as the total character of the absorption point out that the position of the side chains in isopropyl-p-xylene is a 1,2,4 one. A condensation of p-xylene with propylene (in equimolar quantities) leads to the formation of the above-described 1,4-dimethyl-2-isopropyl-benzene with a certain quantity of the fraction with the boiling point $225-235^{\circ}$ which has frozen. The crystals recrystallized from alcohol had a melting point of $36-37^{\circ}$ and an empirical formula $C_{14}H_{22}$ according to the analysis.

In the ultraviolet range the preparation obtained was very similar to the character of the absorption spectrum of durene (Fig 1: II). 1,4-dimethyl-2-isopropyl-benzene was introduced into the reaction with cyclopentene in the presence of aluminum chloride which took place under weak heating. Cyclopentene did

Card 2/4

On Some Alkyl-cyclopentyl-benzenes

SOV/20-125-6-26/61

not enter completely the reaction. Among other methods, repeated recrystallizations from alcohol yielded two substances: (a) (spectrum see Fig 1), melting point $29.5-30.5^{\circ}$, empirical formula $C_{16}H_{24}$ as fine needles; (b) fine-crystalline substance, melting point 80° . The substance (a) corresponds spectroscopically to durene. The same type of the absorption bands of cyclopentyl-p-xylene and durene is indicative of a structure of the hydrocarbons produced as follows: 1,4-dimethyl-2-isopropyl-5-cyclopentyl-benzene. It is assumed that the hydrocarbon with the melting point 80° corresponds to penta-substituted benzene with two methyl-, two cyclopentyl-, and one isopropyl group. It was, however, found that the spectrum of the aforesaid substance corresponds to that of dicyclopentyl-p-xylene (Ref 7). An empirical formula $C_{18}H_{26}$ was analytically detected for the latter. It is quite obvious that this is dicyclopentyl-p-xylene. It is produced by the interaction between 1,4-dimethyl-2-isopropyl-benzene and cyclopentene under the given conditions and with the separation of the isopropyl group which is replaced by the cyclopentyl radical. The theory of the considerable difficulties met in the production of

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On Some Alkyl-cyclopentyl-benzenes

SOV/20-125-6-26/61

penta-substituted benzenes containing relatively heavy side chains is thus confirmed. There are 1 figure and 8 references, 5 of which are Soviet.

ASSOCIATION: Institut neftekhimicheskogo sinteza Akademii nauk SSSR
(Institute of Petroleum-chemical Synthesis of the Academy of Sciences USSR)

PRESENTED: January 6, 1959, by A. V. Topchiyev, Academician

SUBMITTED: November 25, 1958

Card 4/4

5(2)

AUTHORS:

Topchiyev, A. V., Academician,
Tsytovich, N. E., Pokrovskaya, Ye. S.

SOV/20-125-6-28/61

TITLE:

Synthesis and Properties of Alkyl Indanes With a Substituent
in the Five-membered Ring (Sintez i svoystva alkilindanov s
zamestitel'em v pyatichlennom kol'tse)

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 125, Nr 6, pp 1275-1276
(USSR)

ABSTRACT:

After a survey of publications (Refs 1-8) the authors state that e.g. the synthesis of indane homologues with one or two side chains in the five-membered ring is complicated, i.e. they are obtained by closing the ring on the basis of phenyl-propionic acid, β -alkyl-phenyl-propionic acid, and benzyl-alkyl-malonic ester - and has to pass through several stages. In the present paper the synthesis of alkyl indanes with a substituent in the five-membered ring is described by a simple method: according to the method of Thiele (Ref 6). The authors tried to condense indene with methyl-ethyl ketone according to Thiele, this method, however, gave only a small yield of double-unsaturated (dvunepredel'nyy) hydrocarbon (approximately 7%). The changed reaction conditions offered, however, a butylidene-indene yield

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Synthesis and Properties of Alkyl Indanes With a
Substituent in the Five-membered Ring

SOV/20-125-6-28/61

of 38% of the theoretical one. The isolated hydrocarbon was yellow and had a boiling point of $122-122.5^{\circ}$ at 6 torr. A hydrogenation at usual temperature and a hydrogen pressure of 125 atmospheric excess pressure in the presence of a nickel-skeleton catalyst lead to a colorless secondary butyl-indane-1 (Table 1). A yellow hydrocarbon fraction with $136^{\circ}/4 - 145^{\circ}/4$ boiling within a wide temperature range was isolated from indene and methyl-butyl ketone introduced into the reaction according to reference 8. A colorless hydrocarbon, i.e. 2-hexyl-indane-1 (Table 1) was produced by the hydrogenation of this fraction, a further above-mentioned treatment, and a chromatographic separation on silica gel. Still higher yields were obtained with 2 volumes H_2SO_4 of indene and acetone in an ethereal solution and in the nitrogen current. The hydrocarbon can be separated more easily by this method. After hydrogenation and repeated vacuum distillation the wide yellow fraction $89^{\circ}/4 - 116^{\circ}/4$ yielded colorless isopropyl-indane-1 (Table 1). This substance was produced already earlier by another method (Ref 9) which gave, however, only its boiling point. The refractive index of the resultant 2-hexyl-indane-1 differs from that of references

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Synthesis and Properties of Alkyl Indanes With a
Substituent in the Five-membered Ring

SOV/20-125-6-28/61

3 and 5. This difference is assumed to be caused by a deviating structure of the hexyl radical. There are 1 table and 8 references, 2 of which are Soviet.

ASSOCIATION: Institut neftekhimicheskogo sinteza Akademii nauk SSSR (Institute of Petroleum-Chemical Synthesis of the Academy of Sciences USSR)

SUBMITTED: January 5, 1959

Card 3/3

5(3)
 AUTHORS: Topchiyev, A. V., Academician, SOV/20-128-3-34/58
 Tsytoich, N. E., Pokrovskaya,
 Ye. S.

TITLE: Synthesis of Hydrocarbons of the Indane Series

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 128, Nr 3, pp 558-560(USSR)

ABSTRACT: In previous papers on the synthesis mentioned in the title, a complicated method of producing the alkyl indanes was described (Refs 1-3). Another method - alkylation of indane with unsaturated hydrocarbons for the introduction of side chains into the aromatic ring (Refs 4-7) - yielded satisfactory results. It was also used in the present paper. The alkylation was carried out under continuous mechanical stirring, and cooling with ice water. After 2-3 further distillations of the principal fraction of the reaction products separated by usual distillation, the position of the side chains was determined by ultraviolet spectra (by M. V. Shishkina, Laboratoriya fiziki i fiziko-khimii nefi - Laboratory of Physics and Physical Chemistry of Petroleum, at the authors' institute). In all monosubstituted indanes, the side chain was in position 5 on the aromatic ring. The indane hydrocarbons obtained, together with their constants, are indicated in table 1. They are: tertiary butyl-indane-5 ($C_{13}H_{18}$), heptyl-indane-5($C_{16}H_{24}$),

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Synthesis of Hydrocarbons of the Indane Series SOV/20-128-3-34/58

iso-octyl-indane-5 ($C_{17}H_{26}$), cyclo-pentyl-indane-5 ($C_{14}H_{18}$),
dicyclo-pentyl-indane ($C_{19}H_{26}$), tricyclo-pentyl-indane ($C_{24}H_{34}$),
and cyclo-pentyl-indane-1 ($C_{14}H_{18}$). There are 1 table and
13 references, 4 of which are Soviet.

ASSOCIATION: Institut neftekhimicheskogo sinteza Akademii nauk SSSR
(Institute of Petroleum-chemical Synthesis of the Academy of
Sciences, USSR)

SUBMITTED: June 5, 1959

Card 2/2

5.3300

~~5-3~~

AUTHORS:

Shimanko, N. A., Pokrovskaya, Ye. S.

68163

SOV/20-129-6-32/69

TITLE:

On Some Polyalkylbenzenes and Polyalkylcyclopentylbenzenes

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 129, Nr 6, pp 1313 - 1316
(USSR)

ABSTRACT:

Polyalkylbenzenes (heptyl₇xylenes) were synthesized by alkylation of the 3 isomeric xylenes with heptene under the effect of concentrated H_2SO_4 (Refs 1,2). The position of the side chains of the hydrocarbons mentioned in the title was determined according to the spectra in the ultraviolet range. In the above mentioned condensation, the ratio xylene : heptene : sulfuric acid was 3 : 1 : 1. The monoalkylate yield was 50-70% with regard to heptene. No higher substitution products were formed. The hydrocarbon $C_{15}H_{24}$ with a boiling point 97-98°/4 mm and a molecular weight of 203, 202 was separated in the condensation of o-xylene with heptene. Its properties as well as those of all compounds prepared in this connection are shown in table 1. A corresponding dimethylheptylbenzene was formed from m-xylene and heptene. Together with heptene, p-xylene yielded a hydrocarbon boiling

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at $104^{\circ}/6$ mm with a molecular weight of 204, 205. The position of the substituents in the substances prepared was determined on the basis of their absorption spectra in the close ultraviolet range. The spectra of heptyl-c-xylene (A, Fig 1 : 1), heptyl-m-xylene (B, Fig 1 : 3), and heptyl-p-xylene (V, Fig 1 : 5) are typical of compounds of the pseudocumene type (Fig 2 : 1) because of their course. These structural types of the compounds A, B, and V are proved by the similarity of their absorption spectra with those of the following hydrocarbons: isooctyl-xylene (Fig 1 : 2, Ref 5), cyclohexyl-m-xylene (Fig 1 : 4), and cyclohexyl-p-xylene (Fig 1 : 6, Ref 3). The practically complete accordance of the frequency characteristics indicates that the heptyl group is branched in all 3 cases and connected with the benzene ring by a secondary carbon atom. Thus, it may be taken for granted that the substances synthesized are: 1,2-dimethyl-4-isoheptylbenzene, 1,3-dimethyl-4-isoheptylbenzene, and 1,4-dimethyl-2-isoheptylbenzene. It had been proved previously that, in the reaction of a trisubstituted benzene with side chains in 1,2,4-position with cyclopentene (under the effect of aluminum chloride), a benzene substituted in the position 1,2,4,5 is formed as a main product. No isomerization took place. This

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assumption was checked by the authors by means of heptyl-p-xy-
lene and cyclopentene. The condensation of 89 g of heptyl-p-xy-
lene with 22.5 g of cyclopentene yielded 1,4-dimethyl-2-heptyl-5-
cyclopentylbenzene without isomerization. Its absorption spectrum
(Fig 3 : 1) resembles the spectrum of durene (Fig 2 : a) and of
cyclopentylpseudocumene (Fig 3 : 2, Ref 3) as regards exterior
and intensity. An analogous reaction was carried out between
tert.butyl-o-xylene and cyclopentene. Figure 4 : 1 shows the
absorption spectrum of the substance formed: 1,2-dimethyl-4-
tert.butyl-6-cyclopentylbenzene. There are 4 figures, 2 tables,
and 8 references, 6 of which are Soviet.

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TITLE: Viscosity of Hydrocarbons at Low Temperatures

PERIODICAL: Khimiya i tekhnologiya topliv i masel, 1960, Nr 2,
pp 11-19 (USSR)

ABSTRACT: The viscosity of 20 different hydrocarbons at various
temperatures are measured. The experimental data are
tabulated and compared with the data of other authors.
The hydrocarbons are: (1) n-hexane; (2) n-heptane; (3) n-octane; (4)
n-nonane; (5) n-decane; (6) n-undecane; (7) n-dodecane; (8) n-tridecane;
(9) n-tetradecane; (10) n-pentadecane; (11) n-hexadecane; (12) n-heptadecane;
(13) n-octadecane; (14) n-nonadecane; (15) n-eicosane; (16) n-hentriacontane;
(17) n-tetracontane; (18) n-pentacosane; (19) n-hexacosane; (20) n-heptacosane.
The viscosity of these hydrocarbons is measured at various temperatures from -150 to -250°C.
The data are compared with the data of other authors.
The viscosity of these hydrocarbons is measured at various temperatures from -150 to -250°C.
The data are compared with the data of other authors.

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AUTHORS: Tsytoich, N. E. and Pokrovskaya, Ye. S.
TITLE: Synthesis of Hydrocarbons of the Indan Series With Side Chains in the Five-membered and the Benzene Ring
PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 134, No. 5, pp. 1119-1122

TEXT: The authors describe the synthesis of hydrocarbons of the indan series with substituents in the five- or six-membered ring, as well as with substituents in both rings at the same time. The substances A, C-E were produced for the first time. A) 1-cyclohexyl indan was produced (similar to 1-cyclopentyl indan, Ref. 2) by condensation of indene in ethereal solution with cyclohexanone (indene : ketone = 2 : 1) in the presence of KOH solution in methanol. B) 1-isopropyl indan (described earlier in Ref. 1). The reaction product of indene with acetone (2 : 1) was hydrogenated over nickel skeleton catalyst at an initial hydrogen pressure of 150 atm and room temperature, and subsequently distilled three times. Two carbon fractions (86-87 and 87-88°C) were isolated, whose

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